

149 11864
Pieder
CB-05-1864

FIG. 24.

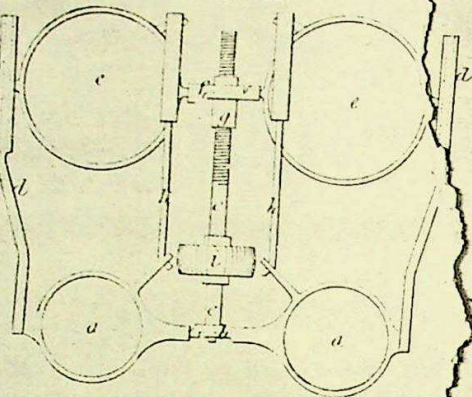


FIG. 26.

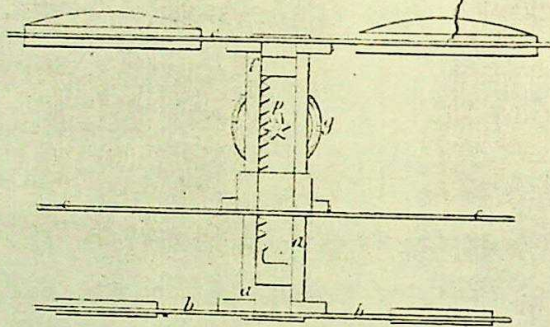


FIG. 29.

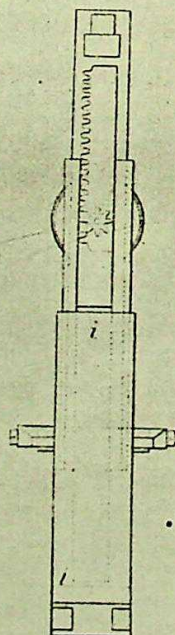


FIG. 30.

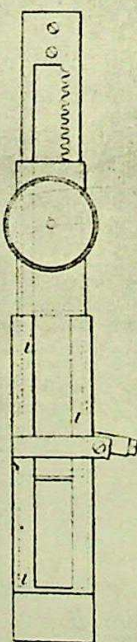


FIG. 27.

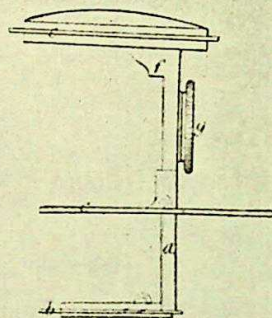


FIG. 28.

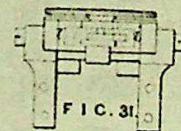
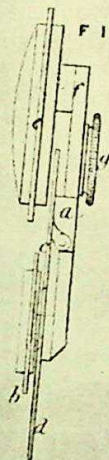
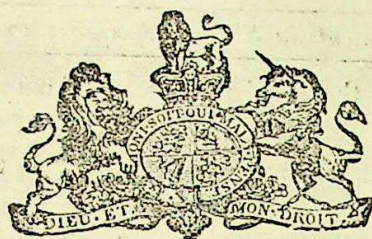


FIG. 31.

gle

359/408



A.D. 1864, 6th MAY. N° 1149.

Shades, Spectacles, and Eye Glasses.

LETTERS PATENT to Aimé Rieder, Gentleman, of 13, Rue Gaillon, Paris,
for the Invention of, "IMPROVEMENTS IN SHADES, SPECTACLES, AND EYE
GLASSES, WHICH CAN ALSO BE APPLIED TO TELESCOPES AND STEREOSCOPES."

Sealed the 4th November 1864, and dated the 6th May 1864.

PROVISIONAL SPECIFICATION left by the said Aimé Rieder at the
Office of the Commissioners of Patents, with his Petition, on the
6th May 1864.

I, AIMÉ RIEDER, Gentleman, of 13, Rue Gaillon, Paris, do hereby declare
the nature of the said Invention for "IMPROVEMENTS IN SHADES, SPECTACLES,
AND EYE GLASSES, WHICH CAN ALSO BE APPLIED TO TELESCOPES AND STEREOSCOPES,"
to be as follows:—

My improvements relate to the manufacture of shades with or without
glasses in such a manner that they can be folded into a convenient size for
10 holding in the pocket, and for this purpose I construct the framework of the
shade of four different parts, viz., the top, the two sides, and the front, in which
glasses can be inserted, and to which I also attach a handle, and unite the
edges of the three latter parts to those of the former, either by a metallic joint
or by a joint of flexible material, so that they can be easily folded flat, one on
15 the other, and in order that such article be further reduced in size, I divide
the top and front parts in two halves down the centre, which parts are con-
nected as above-mentioned so as to be easily folded one on the other, and when
it is desirable that such shades be provided with extra optical glasses, I place

Rieder's Improvements in Shades, Spectacles, and Eye-glasses.

them within the shade at the requisite distance from and parallel with the first pair of glasses, and I set them in a light frame of metal, or other appropriate material, jointed to the top and united by wire rods to the front of the shade so that it will be folded down and lifted up by the same motion of the front piece; and for those glasses which require to be set to focus, I make use of a screw placed in the centre of the top of the shade, and as near to its surface as practicable, one end of said screw being made to enter a tapped hole in the frame of said optical glasses, and in such case I make use of tubular tie rods that slide in holes made in the frames of one or other of the glasses.

Another improvement in folding opera glasses consists in constructing them so that they pivot on a central axis passing through the line of their diameter instead of folding them at a joint placed at the basis of the glasses, and for this purpose I set the front pair of glasses in a light frame of metal or other appropriate substance provided on either outer side with metal rods protruding a little beyond the focus line of the next set of glasses which I cause to slide in such rods by means of a screw so as to set the same at focus, and I further connect the two sets of glasses with extensible rods so as to accommodate themselves to whatever distance apart the glasses may have to be set, and with this kind of opera glass I make use of an external casing made of a light flexible material.

I apply this latter system to the construction of folding telescopes, and where more than two sets of glasses are used it will be merely requisite to connect the whole series in the manner above described, and I apply the former system of construction to stereoscopic boxes, the bottom and back pieces of which being united to the four other parts mentioned on one or both of their edges either by a fixed flexible joint, or a fixed metallic joint, or by a metallic attachment such as a hook capable of being disconnected.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Aimé Rieder in the Great Seal Patent Office on the 5th November 1864.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, AIMÉ RIEDER, Gentleman, of 13, Rue Gaillon, Paris, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Sixth day of May, in the year of our Lord One thousand eight hundred and sixty-four, in the twenty-seventh year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Aimé Rieder, Her special licence that I, the said Aimé

Rieder's Improvements in Shades, Spectacles, and Eye-glasses.

Rieder, my executors, administrators, and assigns, or such others as I, the said Aimé Rieder, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, 5 exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN SHADES, SPECTACLES, AND EYE GLASSES, WHICH CAN ALSO BE APPLIED TO TELESCOPES AND STEREOSCOPES," upon the condition (amongst others) that I, the said Aimé Rieder, my executors or administrators, by an instrument in writing 10 under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

15 NOW KNOW YE, that I, the said Aimé Rieder, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement (that is to say):—

My improvements relate to the manufacture of shades, with or without 20 glasses, in such manner that they can be folded into a convenient size for holding in the pocket, and for this purpose I construct the framework of the shade of four different parts, viz., the top, the two sides, and the front, in which glasses can be inserted, and to which I also attach a handle and unite the edges of the three latter parts to those of the former either by 25 a metallic joint or by a joint of flexible material, so that they can be easily folded flat, one on the other; and in order that such article be further reduced in size, I divide the top and front parts in two halves down the centre, which parts are connected as above mentioned so as to be easily folded one on the other, and when it is desirable that such shades be provided with extra optical 30 glasses, I place them within the shade at the requisite distance from, and parallel with the first pair of glasses, and I set them in a light frame of metal, or other appropriate material, jointed to the top and united by wire rods to the front of the shade so that it will be folded down and lifted up by the same motion of the front piece, and for these glasses which require to be set 35 to focus, I make use of a screw placed in the centre of the top of shade, and as near to its surface as practicable, one end of said screw being made to enter a tapped hole in the frame of said optical glasses, and in such a case I make use of tubular eye rods that slide in holes made in the frames of one of the glasses.

Rieder's Improvements in Shades, Spectacles, and Eye-glasses.

Another improvement in folding opera glasses consists in constructing them so that they pivot on a central axis passing through the line of their diameter, instead of folding them at a joint placed at the basis of the glasses, and for this purpose I set the front pair of glasses in a light frame of metal or other appropriate substance, provided on either outer side with metal rods protruding a little beyond the focus line of the next set of glasses, which I cause to slide in such rods by means of a screw, so as to set the same at focus, and I further connect the two sets of glasses with extensible rods so as to accommodate themselves to whatever distance apart the glasses may have to be set, and with this kind of opera glass I make use of an external casing made of a light flexible material. 5 10

I apply this latter system to the construction of folding telescopes, and where more than two sets of glasses are used it will be merely requisite to connect the whole series in the manner above described; and I apply the former system of construction to stereoscopic boxes, the bottom and back pieces of which being united to the four other parts mentioned on one or both of their edges by a fixed flexible joint, or a fixed metallic joint, or by a metallic attachment, such as a hook capable of being disconnected. 15

In order that my different improvements be better understood, I have represented them in the thirty-three Figures of the accompanying Sheet of Drawings wherein the Figures from 1 to 21 have reference to the first part of my Invention, and the remainder (from 22 to 33) to the latter part of the same. 20

Fig. 1 is a plan of a shade partially folded, in which *a* is the top; *b, b*, the sides, and *c* the front provided with a handle *d*, and with or without glasses as may be required or preferred; these different parts are jointed together in any convenient manner, and such shades can be either folded lengthways, as indicated by the vertical dotted line, or crosswise as shewn in Fig. 2, in which latter case the front *c* can be made of one rigid piece without any joint in the middle. 25 30

Fig. 3 represents in perspective one of my shades modified so as to fit the head of the wearer, to which it can be attached by an elastic string passing at the back of the head, or under the chin and over the ears, in either of which cases the handle can be dispensed with.

The four Figs. from 4 to 7 represent one manner of mounting an additional pair of glasses in a shade. Fig. 4 being a front elevation of the same; Fig. 5, a plan, seen underneath; Fig. 6 a separate lateral elevation of such additional slide open, and Fig. 7 a similar view, the slide being closed; for this purpose I mount on the back or top *a* of the shade two metallic guides *e, e*, through 35

Rieder's Improvements in Shades, Spectacles, and Eye-glasses.

which I place the additional slide *f*, and which I maintain in an upright position by means of the spring *g*, when not in use, by unhooking the said spring *g* the slide can be doubled up flat as shewn in Fig. 7.

The five Figs., from 8 to 12, represent another manner of mounting optical glasses in a shade. Fig. 8 being a plan of same seen underneath and unfolded for use; Fig. 9 a front elevation; Fig. 10 a side ditto; Fig. 11 a plan seen underneath, the parts being partly folded, and Fig. 12 a detailed part.

a is the top of the shade; *b, b*, the two sides which are jointed to *a*; *h, h*, a first pair of glasses fitted in the front *d* which is jointed to *a*, and united by the tie plates *i, i*, to the diaphragm *j*, which latter is also jointed to the plate *a*, so that this assemblage of parts constituting a camera can be laid flat as shewn in Fig. 11; *k, k*, are the second pair of glasses fitted in the cross plate *l*, which is articulated to a rack slide *m* fitted on the part *a*; this second pair of glasses can also be laid flat in the same manner as the former and maintained in either of these positions by means of a spring. To set to focus I make use of a pinion *n* gearing into a rack *o*, and worked from the outside of the shade by the button *p*, and where the protusion of the said button is objectionable I make use of a milled rod *q*, jointed to the stem of the pinion *n*, see Fig. 12.

The four Figs., from 13 to 16, represent another system of instrument folding through the axis of the shade, and consequently occupying only one-half of the space required by the preceeding one; Fig. 13 is a plan seen underneath of the instrument set up for use; Fig. 14 a similar view, partially folded; Fig. 15 a perspective view; the instrument being closed for the pocket, and Fig. 16 a detailed part; in this specimen I make use of additional joints *r, r*, for the second folding of each pair of glasses, the first folding taking place on the hinges *s², s³*, and for holding the front pair of glasses I make use of a catch *t*, Figs. 13, 14, and 16 fitted in the upright *s*, and for the second pair of a spring *u* adapted to the upright *s³*, and I maintain in this glass the camera above mentioned which can be formed either of four distinct parts, i.e., the front frame *d*, the diaphragm *j*, and the two tie pieces *i, i*, one above and the other below, or of the two former parts with the top tie piece only, the diaphragm being jointed to the plate *a*, which thus constitutes the fourth side of the camera. I also for this kind of instrument propose folding the glasses against an upright bar capable of extension, and running in the centre of the instrument from end to end, in such case the front frame and diaphragm connected by a flexible material are jointed up against the said bar and made to fold against the same in the direction of the second pair of glasses, whilst these latter are also similarly jointed and caused to fold in the same direction,

Riedler's Improvements in Shades, Spectacles, and Eye-glasses.

a rack attached to that part of the bar to which the second pair of glasses are attached serves to set the same to focus.

The two Figs. 17 and 18 represent another manner of forming the camera, and of jointing it to the framework; Fig. 17 is an end elevation, and Fig. 18 a lateral elevation of this arrangement of parts. *m* is the rack slide to which are attached lateral plates *v, v*, serving to receive the bottom plates *a*, and to these plates *v, v*, I attach the front plates *d, d*, the tye plates *i, i*, and the diaphragms *j, j*, which constitute the camera, and in order that the folding or unfolding of these double parts may be made to act simultaneously, I connect them by the plates, *w, w*, jointed separately to the front plates *d, d*, and united together by the joint *.

The three Figs., 19 to 21, represent a mechanical arrangement of parts, by means of which the glasses composing each pair are brought closer together on the folding of the instrument, and drawn out when the said instrument is set for use, the object of which arrangement is to diminish the volume of the instrument when completely folded; Fig. 19 is a front elevation, the glasses being set full apart; Fig. 20 a similar view, the glasses being drawn together; and Fig. 21 a lateral elevation, the parts being in the position of Fig. 20. *a* is the frame of the shade; *i*, the rack slide, and *x* an upright jointed to the extremity of *i*, and to which I suspend the glass frames *c*, so that they may slide easily towards and from one another, and when the instrument is closed, and the upright lowered down on its hinge, I bring the glasses closer together by means of the vertical rod *x¹* working in the guides *x², x²*, and which striking *i* passes from the position indicated in Fig. 19 to that seen in Fig. 20, and by this motion the little horizontal pin *y* will have drawn the glasses closer together by its action on the diagonal slots *z, z*, one of which is made in each of the glass frames *c*, and in opposite directions to one another, and when this combined framework is raised, a spring which is not indicated in the Drawing, and acting upwards on the rod *x¹* forces the glasses apart.

The three Figs., 22 to 24, refer to a description of folding opera glass where the glasses are made to pivot on a central axis passing through the line of their diameter, instead of folding them as described in the former cases. Fig. 22 is a front elevation of this instrument; Fig. 23 a plan of same ready for use, and Fig. 24 a similar view, the glasses being pivoted flat. *a, a*, are the front pair of glasses set in frames so as to pivot on the eyes *b, b*, fitted loosely on the central adjusting rod *c*, and from these glasses extend the external rods or frames *d, d*, which serve for pivots to the external axis of the second pair of glasses *e, e*, which pivot internally on the eyes *f, f*, which

Rieder's Improvements in Shades, Spectacles, and Eye-glasses.

are fitted loosely on the nut *g*, running on the screw cut on the extremity of the rod *c*, and in order that both sets of glasses be made to pivot simultaneously I connect them with the tubular articulated tie rods *h, h*, the milled button *i* made fast on the rod *c* serves to set to focus, and I cover this system of opera
5 glass with a flexible opaque cover made of leather, caoutchouc, or other appropriate material.

The six Figs., 25 to 31, have reference to a construction of folding opera glass where the glasses pivot on a basis or framework placed below their axis; Fig. 25 is a plan of the same folded flat; Fig. 26 a similar view, the
10 instrument being unfolded ready for use; Fig. 27 a lateral elevation, ditto, ditto; Fig. 28 a similar view, the parts being folded to correspond with those of Fig. 25; and Fig. 29 a plan of a compound slide extended; Fig. 30 a similar view, the slide being drawn in; and Fig. 31 an end elevation of same. *a* is the rack slide to which are jointed the front frame *b* containing the first pair
5 of glasses, and the diaphragm *c* to which is attached the handle *d*, and which serve to form a camera obscura by means of a flexible opaque material sewn through the small holes shewn in the periphery of said parts; *e* is the back frame containing the second pair of glasses *g* which are jointed to the end of the rack *f* sliding in the part *a*; and to set this latter pair of glasses to focus,
15 I make use of a pinion *p*, propelled by the milled head *g*, and gearing into the rack *f* which can work to and fro freely in the part *a*. Where for certain description of glasses an extended range of focus is required, I make use of the compound slide, Figs. 29, 30 and 31, which independently of the parts above mentioned consists in an external slide *i* in which the said parts can be made
25 to slide by hand.

The two Figs. 32 and 33 have reference to a modification of ordinary spectacles or barnacles, by which I am enabled to adjust in the same shades which completely protect the eye; Fig. 32 is a plan, and Fig. 33 an elevation of this improvement; *j, j*, are the glasses; *k*, the frame; and *l, l*, additional
30 metallic strips attached to the upper part of said framing with an interval between sufficient for inserting the moveable shades *m, m*, which can be made of any appropriate light material.

Having thus explained my different improvements, and the best manner I am acquainted with for putting the same into practice, I claim as my
35 Invention,—

Firstly, the different mechanical arrangements of parts as applied to folding shades and opera or other glasses combined with the same.

Secondly, the different arrangements of parts and construction relating to folding opera glasses.

Rieder's Improvements in Shades, Spectacles, and Eye-glasses.

And, thirdly, the application of either or any of the above-mentioned improvements to telescopes and stereoscopic boxes.

In witness whereof, I, the said Aimé Rieder, have hereunto set my hand and seal, this First day of November, in the year of our Lord One thousand eight hundred and sixty-four.

5

AIMÉ RIEDER. (L.S.)

Witness,

D. H. BRANDON.

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1864.